i-Ready Stretch Growth® as a Path toward Proficiency

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Executive Summary

This study used two years of *i-Ready Diagnostic* data to examine to what degree meeting *i-Ready*'s Stretch Growth targets put students on a path toward proficiency. We used data from more than 1.8 million students and more than 1.9 million students who completed fall and spring *i-Ready Diagnostics* in Reading and Mathematics, respectively, during the 2017–2018 and 2018–2019 school years, the most recent two consecutive school years with a high volume of in-school *i-Ready Diagnostic* data available. Our analyses found that more than 30% of students met Stretch Growth in a given school year and approximately 12% of students met Stretch Growth in both years. In both reading and mathematics, meeting Stretch Growth targets in two consecutive years put students on a path toward proficiency; approximately 80% of these students finished the 2018–2019 academic year at Mid On Grade Level or higher in *i-Ready*, while 95% finished at or above Early On Grade Level. Results of this study provide evidence that *i-Ready*'s Stretch Growth targets are both ambitious and attainable and demonstrate how reaching Stretch Growth in two consecutive years put students on a path toward proficiency.

Introduction

The COVID-19 pandemic triggered major disruptions to student learning that resulted in unprecedented unfinished learning (Curriculum Associates, 2021; Lewis & Kuhfeld, 2021). In reading, the percentage of early grade students who started the 2021–2022 school year not prepared for grade-level work was greater than pre-pandemic levels. In mathematics, results were even more grim, with the percentage of students performing on grade level lower in nearly all of Grades K–8, relative to pre-pandemic levels. What's more, these effects were larger for students attending schools serving mostly Black and Latino students, relative to schools serving mostly White students, and in schools serving students with economic disadvantages.

Given the impacts of the pandemic on reading and mathematics performance, average student growth will not be sufficient to get students on track for grade-level proficiency. Students will need to demonstrate an increase in the rate of growth to "catch up" from unfinished learning, especially those students who were performing below grade level before the pandemic and experienced disproportionate levels of unfinished learning (Dawson, 2022). The pandemic, and resulting unfinished learning, has heightened the need to focus on criterion-referenced data on student performance and growth. Growth goals that are intentionally designed to put students on a path toward grade-level proficiency, as opposed to normative goals—which emphasize average growth—will be essential for getting students back on track.

Since the 2018–2019 school year, the *i-Ready Diagnostic* (hereafter referred to as the "Diagnostic"), an interim assessment in Reading and Mathematics used by more than 10 million students in Grades K–8 across the United States, has provided both normative- and criterion-referenced growth targets. Typical Growth targets reflect the average fall-to-spring growth shown historically by students in each subject, grade, and starting *i-Ready* placement level, while Stretch Growth targets show the fall-to-spring growth needed to put students on a path toward proficiency in one, two, or more than two years.

Criterion-referenced growth goals, such as *i-Ready*'s Stretch Growth, purport to be ambitious but attainable and put students on a one- or multi-year path toward proficiency (Curriculum Associates, 2018). This study provides validity evidence for these claims by examining attainment of Stretch Growth, and how meeting this growth goal changes proficiency status in two years of Reading and Mathematics Diagnostic data. Specifically, we examined the number and percentage of students who met their Stretch Growth target in one or both years, as well as the percentage of these students who did in fact reach proficiency in *i-Ready* after one or two years of meeting Stretch Growth.

Methodology

Research Question

This study attempted to address the following two research questions:

1. How frequently do students meet their Stretch Growth targets?
2. How frequently do students who meet their Stretch Growth targets get to proficiency?

Data

This study used data from over 1.8 million and over 1.9 million students who completed *Diagnostics* in reading or mathematics, respectively, during the 2017–2018 and 2018–2019 school years. Because *i-Ready* provides growth targets for grades K–8, we focused on students who were in grades K–7 during the 2017–2018 school year and advanced to grades 1–8 during the 2018–2019 school year. To qualify for inclusion in the study, each student had to have completed a Diagnostic during both the fall and spring testing windows[1] in each school year. Table 1 shows the number of students per grade cohort in Reading and Mathematics.

Table 1: Number of Students by Grade Cohort in Reading and Mathematics

Grade Cohort	Reading	Mathematics
K → 1	194,513	181,318
1 → 2	273,908	275,104
2 → 3	289,541	301,399
3 → 4	301,720	325,767
4 → 5	300,257	332,403
5 → 6	188,075	221,988
6 → 7	166,304	191,678
7 → 8	143,553	148,002
Total	1,857,871	1,977,659

Stretch Growth Targets

i-Ready classifies students into criterion-referenced placement levels based on their Diagnostic scale score. Students who place below or above their chronological grade level are classified into a placement grade level (i.e., Levels K–8), while students who place on grade level are assigned a placement of Early, Mid, or Late On Grade Level. For the purpose of assigning growth targets, students' fall Diagnostic placements are categorized into five relative placement levels: Three or More Grade Levels Below, Two Grade Levels Below, One Grade Level Below, Early On Grade Level, and Mid On Grade Level or Above. Students' Typical Growth and Stretch Growth targets are determined by the subject, chronological grade, and fall Diagnostic relative placement level.

i-Ready's Stretch Growth measures are designed to put students on a path toward proficiency. For students who begin the year below grade level, Stretch Growth targets are designed to put students on a path to Mid On Grade Level or Above (i.e., proficiency) in one year, two years, or more than two years, depending on the subject, grade, and fall relative placement level. For students who begin the year on or above grade level, Stretch Growth targets are designed to put students on a path to Late On Grade Level or Above (i.e., advanced proficiency) in one year, two years, or more than two years, depending on the subject, grade, and fall relative placement level.

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[1]During the selected school years, the *i-Ready* testing windows were defined as follows:

Fall: August 1–November 30

Winter: December 1–March 15

Spring: March 16–June 15

Due to the nature of *i-Ready*'s Stretch Growth targets, students may meet Stretch Growth for one, two, or more than two consecutive years and still not reach proficiency. Within a school year, there are two reasons why a student can meet their Stretch Growth target but not reach proficiency:

1. The student's Stretch Growth target is a two-year or more than two-year target.
2. The student's fall Diagnostic scale score is at the low end of the scale score range for their relative placement level (e.g., a student who starts the year four grade levels below will have the same target as a student in the same grade who starts the year three grade levels below, but the student who starts four grade levels below will obviously need to show greater growth to reach proficiency).

Across two or more school years, there are three reasons why a student can meet their Stretch Growth target in consecutive years but not reach proficiency:

1. The student's Stretch Growth target is a more than two-year target.
2. The student's fall Diagnostic scale score is at the low end of the scale score range for their relative placement level.
3. The student's Diagnostic scale score decreases from spring of one year to fall of the next year (i.e., summer learning loss).

Results

Frequency of Meeting Stretch Growth

The first research question was answered descriptively by calculating the percentage of students who met their Stretch Growth target in 2017–2018, 2018–2019, and in both years. We calculated these results by subject and grade level, as well as by subject, grade level, and starting placement level. Table 2 shows the results by subject and grade level; the breakdown by starting placement level can be found in the Appendix in Table A1.

Table 2: Percentage of Students Meeting Stretch Growth by Subject, Grade, and School Year(s)

Subject	Grade Cohort	Percentage of Students Meeting Stretch Growth		
		2017–2018	2018–2019	Both Years
Reading	K → 1	33%	36%	14%
	1 → 2	38%	36%	16%
	2 → 3	36%	36%	16%
	3 → 4	35%	33%	14%
	4 → 5	32%	31%	12%
	5 → 6	29%	29%	10%
	6 → 7	27%	26%	9%
	7 → 8	25%	24%	7%
Mathematics	K → 1	40%	37%	16%
	1 → 2	38%	31%	13%
	2 → 3	31%	35%	12%
	3 → 4	35%	31%	13%
	4 → 5	32%	24%	10%
	5 → 6	26%	24%	8%
	6 → 7	24%	23%	8%
	7 → 8	22%	22%	7%

i-Ready's Stretch Growth targets were certainly attainable; in each school year, approximately 30% of students met their Stretch Growth target. The targets were also ambitious, with no more than 40% of students meeting Stretch Growth in a given subject, grade, and school year. Approximately 13% and 11% of students met Stretch Growth in both years in reading and mathematics, respectively. The percentage of students meeting Stretch Growth was slightly higher in reading than mathematics and was generally higher in lower grade levels. Comparing grades across cohorts (e.g., Grade 2 → 3 cohort in 2017–2018 versus Grade 1 → 2 cohort in 2018–2019), the percentage of students meeting Stretch Growth was always within 2 percentage points between the two school years for the same subject and grade level.

As shown in Table A1, the *i-Ready* Stretch Growth targets appeared to be attainable for students at all levels; at least 17% of students met Stretch Growth in every subject, grade, and starting placement-level combination. On average, the percentage of students meeting Stretch Growth tended to be higher for students who started at a higher placement level, but this trend was not consistent across all subjects and grades. This general trend makes intuitive sense; students in lower placement levels need to show higher growth to reach proficiency, so their Stretch Growth targets may be more ambitious than those for students who are already starting the year on grade level.

Results of Meeting Stretch Growth

We also used descriptive methods to answer the second research question. Specifically, we examined the frequency distribution of spring Diagnostic placement levels for students who met their Stretch Growth targets. If Stretch Growth puts students on a path toward proficiency, students who meet Stretch Growth should score Mid On Grade Level or Above (i.e., proficient in *i-Ready*) at high rates. Table A2 in the Appendix shows the distribution of ending placement level for students who met Stretch Growth in each school year. Figures 1 and 2 display the spring 2019 placement-level distributions for students who met Stretch Growth in 2017–2018 and 2018–2019 in reading and mathematics, respectively.

Figure 1: Spring 2019 Placement Distribution for Students Meeting Stretch Growth in Both Years: Reading
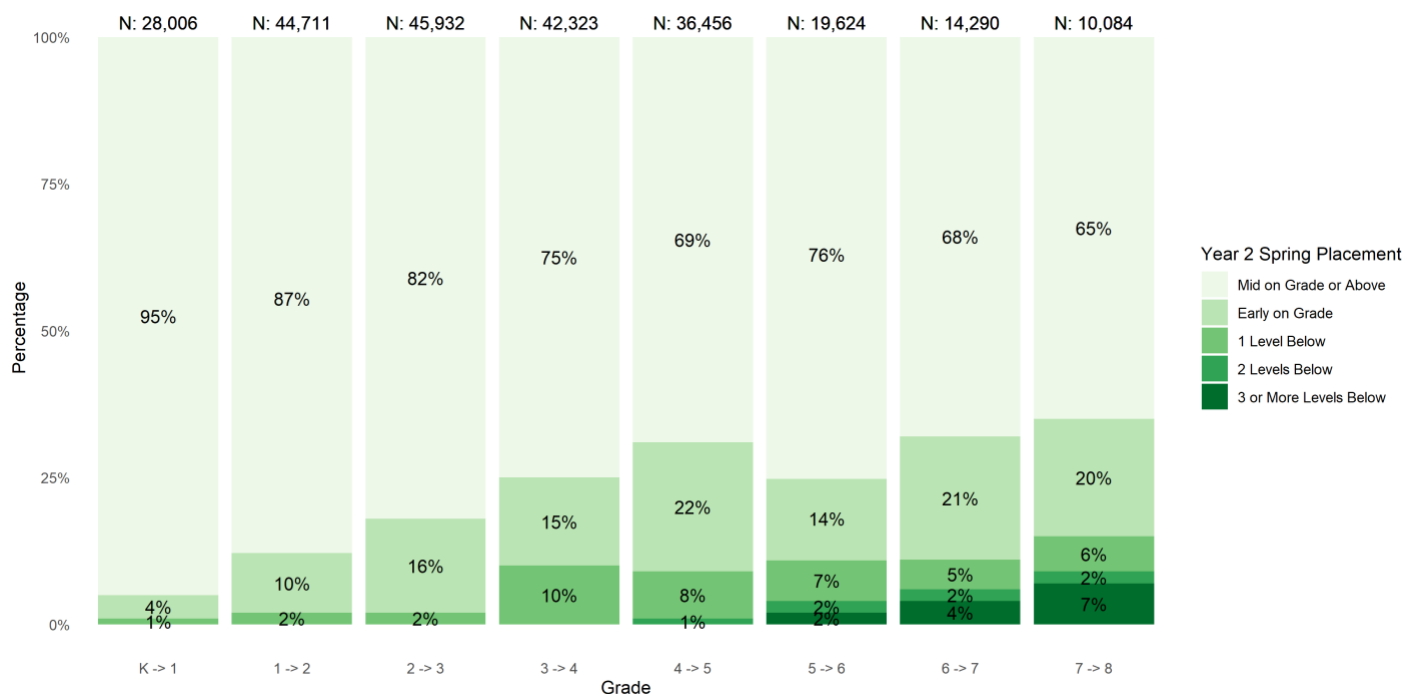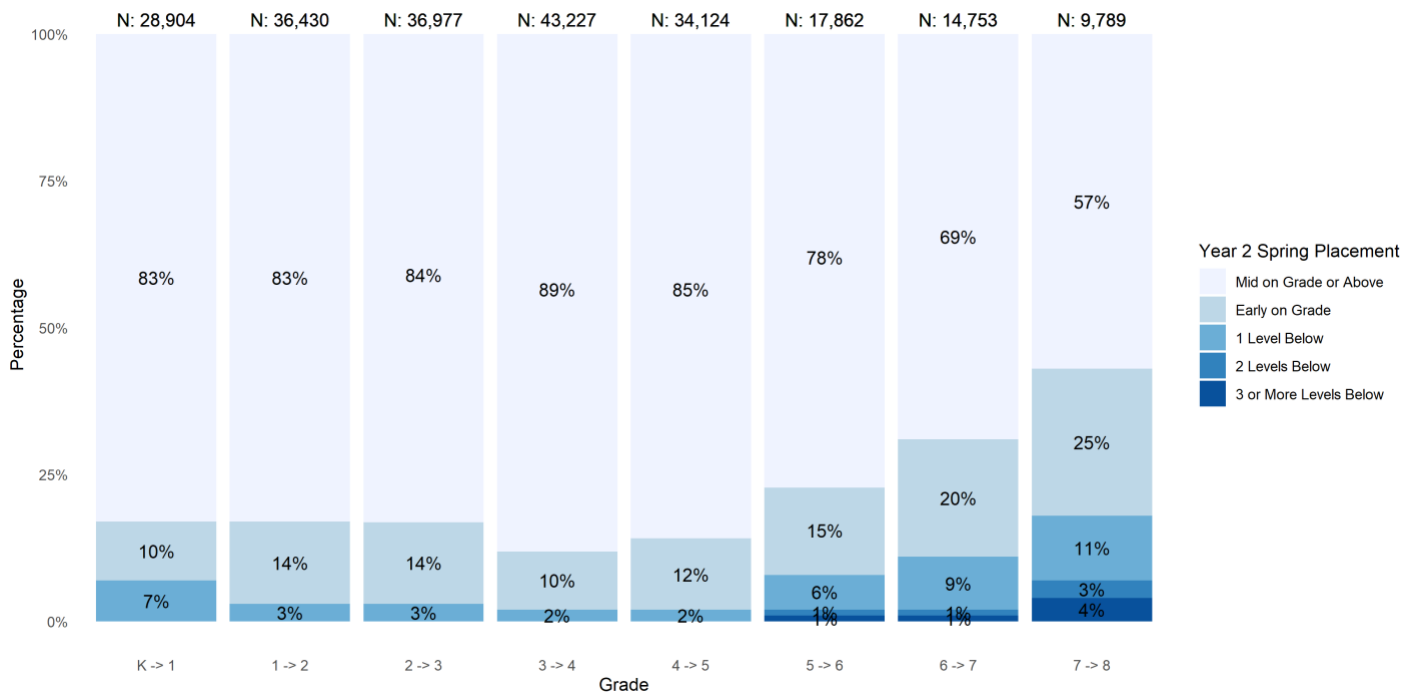
Figure 2: Spring 2019 Placement Distribution for Students Meeting Stretch Growth in Both Years: Mathematics

Of the more than 200,000 students who met Stretch Growth in reading in two consecutive years, 79% ended the second year Mid On Grade Level or Above (i.e., proficient) while 94% ended the second year Early On Grade Level or Above (i.e., on grade level). In mathematics, of the more than 200,000 students who met Stretch Growth in two consecutive years, 82% ended the second year proficient in *i-Ready* while 95% ended the second year on grade level. In reading, the percent proficient was highest for the Grades K → 1 cohort and tended to decrease as grade level increased. In mathematics, the percent proficient was highest for the Grades 3 → 4 and 4 → 5 cohorts, with the Grades K–3 cohorts showing slightly lower percent proficient. As in reading, the percent proficient in mathematics decreased in the middle school grades.

Results by Starting Placement

We also examined the spring 2019 Diagnostic placement distribution for students who met Stretch Growth in both school years, disaggregated by fall 2017 Diagnostic placement level. Figures 3 and 4 show examples of these results from Grades 2–3 in Reading and Grades 4–5 in Mathematics, respectively. These grades levels were chosen as examples because research shows these were the grades most heavily impacted by the pandemic in their respective subjects (Curriculum Associates, 2021). Appendix Table A3 shows the complete results across all subjects, grade levels, and starting placement levels.

As expected, students who started fall 2017 on grade level (i.e., Early or Mid) and met Stretch Growth in 2017–2018 and 2018–2019 almost always finished spring 2019 proficient in *i-Ready*. Additionally, most students who began the 2017–2018 school year One Grade Level Below finished the 2018–2019 school year proficient, and the vast majority finished on grade level. For students who started Two Grade Levels Below, where *i-Ready*'s Stretch Growth targets are two-year or more than two-year targets, most students who met Stretch Growth in both years finished the second year on grade level. Finally, in most subjects and grade cohorts, those students who started Three or More Grade Levels Below and met Stretch Growth in both years finished on grade level less than half of the time and reached proficiency less than 20% of the time. These students did, however, finish the 2018–2019 school year in a much better place than where they started the 2017–2018 school year.

These results show students who meet Stretch Growth in two consecutive school years are more likely to reach proficiency in *i-Ready* if they began the two years near or on grade level. Students who began the first year Three or More Grade Levels Below were much less likely to get to proficiency, but they did end the second year much better off than they began the first year. These

findings are consistent with the language around *i-Ready*'s Stretch Growth targets, in which students who start the year Three or More Grade Levels Below always have a more than two-year path to proficiency (Curriculum Associates, 2018).

Figure 3: Spring 2019 Placement Distribution for Students Meeting Stretch Growth in Both Years by Fall 2017 Placement: Reading Grades 2–3
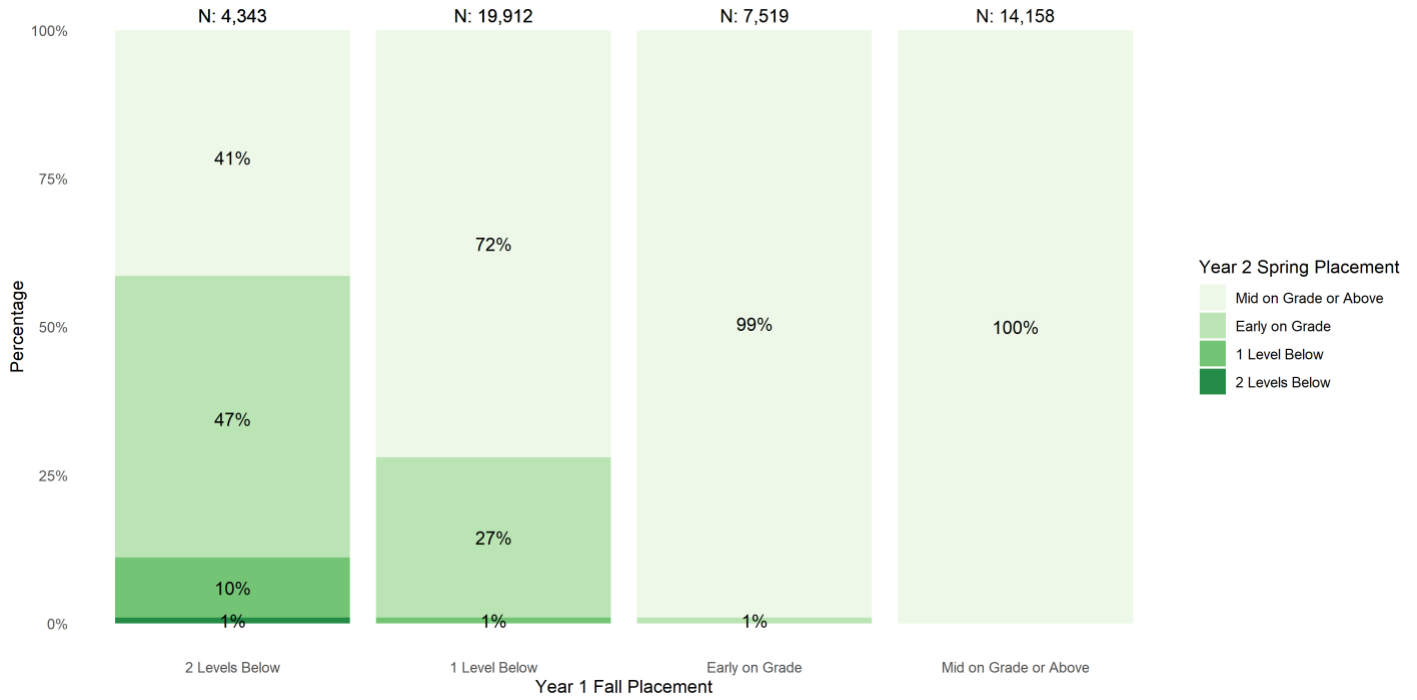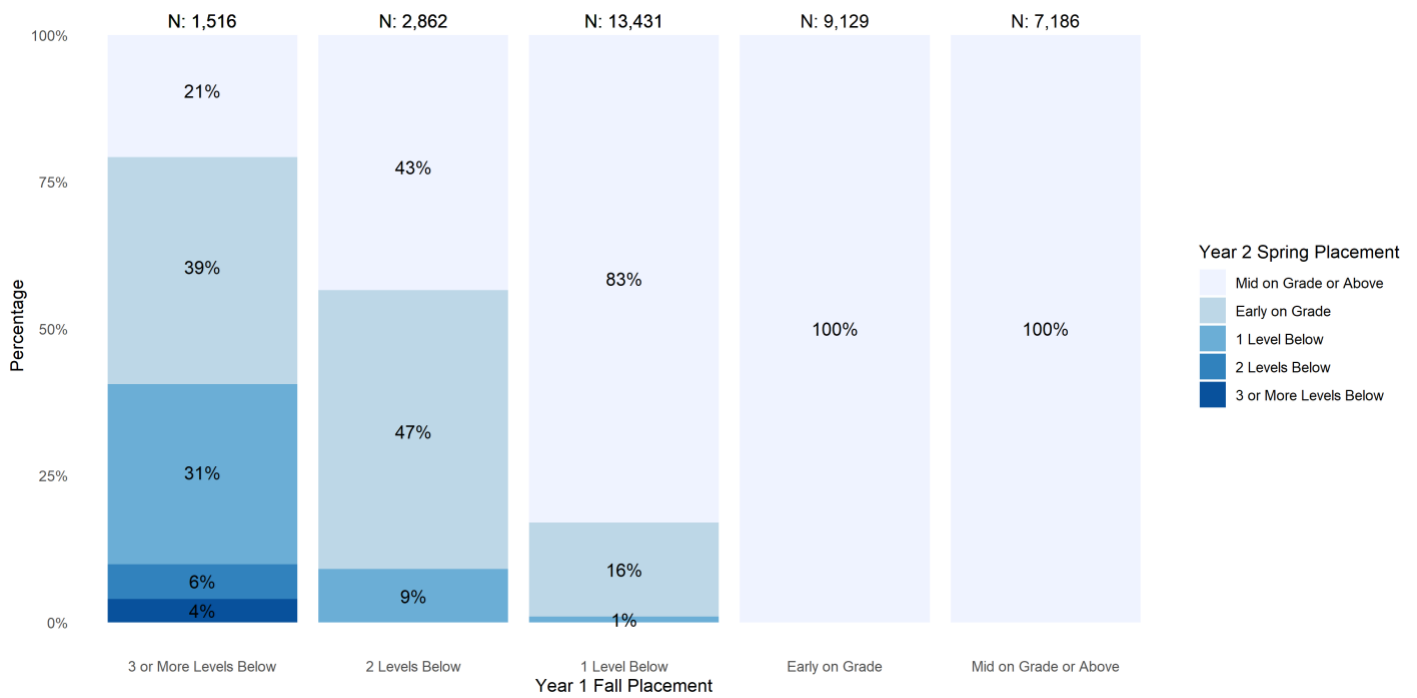

Figure 4: Spring 2019 Placement Distribution for Students Meeting Stretch Growth in Both Years by Fall 2017 Placement: Mathematics Grades 4–5

Conclusion

This study provides validity evidence for *i-Ready*'s Stretch Growth targets as a growth goal that is ambitious, attainable, and puts students on a path toward proficiency. Analysis of two years of Diagnostic data showed that between 20% and 40% of students meet their Stretch Growth goal each year, with higher percentages among students in lower grade levels and slightly higher percentages in reading than mathematics. In nearly all combinations of subject, grade, and starting placement level, at least 20% of students met their Stretch Growth target. Across the two years, approximately 13% and 11% of students met their Stretch Growth target in both years in reading and mathematics, respectively. Again, we saw lower-grade students were more likely to meet their Stretch Growth targets in consecutive years. This descriptive analysis demonstrated that *i-Ready*'s Stretch Growth targets are both ambitious and attainable.

The second set of analyses examined the Diagnostic placement-level distributions among students who met Stretch Growth in both years. Across subjects and grade levels, approximately 80% of students who met Stretch Growth in consecutive years finished the second year proficient in *i-Ready*, while 95% finished on grade level. The percent proficient and percent on grade level were higher in lower grade levels, especially compared to middle school grades, and slightly higher in mathematics than reading. This analysis provides evidence of Stretch Growth as a growth goal that puts students on a path toward proficiency.

Limitations

This study used data from the 2017–2018 and 2018–2019 school years, but *i-Ready*'s Stretch Growth was not introduced until fall of 2018. Thus, students and teachers in the first year of this study did not see the Stretch Growth targets in the *i-Ready* system while those in the second year did. We chose to focus on these two years because they were the last two years with high in-school testing volumes, nationally, for both the fall and spring Diagnostics; spring 2020 through spring 2021 were characterized by high percentages of out-of-school testing. Our descriptive comparison of percent meeting Stretch Growth between students in the same grade levels in different cohorts revealed differences of no more than 2 percentage points and these differences did not systematically favor one year or another. Therefore, the presence of the Stretch Growth targets in *i-Ready* did not seem to impact the percentage of students who met those targets. Finally, the analyses conducted here were entirely descriptive in nature. While there is much we can learn from examining frequencies in a very large sample of students, we recommend future studies use significance testing and model-based methods to answer similar research questions.

References

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Appendix

Table A1: Percentage of Students Meeting Stretch Growth by Subject, Grade, Starting Placement, and School Year(s)

Subject	Grade Cohort	Starting Placement*	Percentage of Students Meeting Stretch Growth		
			2017–2018	2018–2019	Both Years
Reading	K → 1	Two Levels Below	N/A	18%	N/A
		One Level Below	34%	33%	14%
		Early On Grade	26%	50%	14%
		Mid On Grade or Above	45%	47%	20%
	1 → 2	Two Levels Below	21%	17%	7%
		One Level Below	37%	40%	15%
		Early On Grade	49%	33%	25%
		Mid On Grade or Above	46%	49%	25%
	2 → 3	Three or More Levels Below	N/A	17%	N/A
		Two Levels Below	22%	25%	7%
		One Level Below	40%	42%	15%
		Early On Grade	33%	30%	16%
		Mid On Grade or Above	49%	55%	29%
	3 → 4	Three or More Levels Below	22%	23%	6%
		Two Levels Below	26%	25%	8%
		One Level Below	41%	31%	13%
		Early On Grade	29%	37%	12%
		Mid On Grade or Above	52%	44%	28%
	4 → 5	Three or More Levels Below	26%	22%	6%
		Two Levels Below	25%	20%	7%
		One Level Below	30%	35%	10%
		Early On Grade	37%	38%	17%
		Mid On Grade or Above	40%	42%	21%
	5 → 6	Three or More Levels Below	23%	21%	5%
		Two Levels Below	20%	23%	5%
		One Level Below	34%	36%	12%
		Early On Grade	35%	28%	15%
		Mid On Grade or Above	37%	38%	17%
	6 → 7	Three or More Levels Below	21%	21%	5%
		Two Levels Below	21%	25%	6%
		One Level Below	34%	34%	11%
		Early On Grade	26%	23%	10%
		Mid On Grade or Above	35%	31%	13%
	7 → 8	Three or More Levels Below	21%	22%	5%
		Two Levels Below	23%	24%	6%
		One Level Below	31%	28%	9%
		Early On Grade	21%	22%	7%
		Mid On Grade or Above	33%	26%	10%

*Starting placement is fall 2017 placement for 2017–2018, fall 2018 placement for 2018–2019, and fall 2017 placement for both years.

Subject	Grade Cohort	Starting Placement*	Percentage of Students Meeting Stretch Growth		
			2017–2018	2018–2019	Both Years
Mathematics	K → 1	Two Levels Below	N/A	26%	N/A
		One Level Below	45%	39%	17%
		Early On Grade	25%	37%	12%
		Mid On Grade or Above	29%	30%	13%
	1 → 2	Two Levels Below	26%	22%	8%
		One Level Below	40%	38%	14%
		Early On Grade	35%	18%	10%
		Mid On Grade or Above	31%	19%	9%
	2 → 3	Three or More Levels Below	N/A	20%	N/A
		Two Levels Below	23%	27%	8%
		One Level Below	37%	39%	15%
		Early On Grade	18%	37%	9%
		Mid On Grade or Above	20%	36%	10%
	3 → 4	Three or More Levels Below	22%	20%	5%
		Two Levels Below	28%	23%	8%
		One Level Below	38%	32%	14%
		Early On Grade	38%	30%	21%
		Mid On Grade or Above	37%	47%	17%
	4 → 5	Three or More Levels Below	21%	20%	5%
		Two Levels Below	24%	19%	6%
		One Level Below	34%	23%	9%
		Early On Grade	33%	24%	13%
		Mid On Grade or Above	46%	38%	21%
	5 → 6	Three or More Levels Below	21%	20%	4%
		Two Levels Below	22%	21%	5%
		One Level Below	25%	21%	6%
		Early On Grade	26%	26%	10%
		Mid On Grade or Above	39%	42%	19%
	6 → 7	Three or More Levels Below	22%	20%	4%
		Two Levels Below	21%	20%	4%
		One Level Below	21%	21%	6%
		Early On Grade	27%	32%	11%
		Mid On Grade or Above	41%	30%	18%
	7 → 8	Three or More Levels Below	20%	20%	4%
		Two Levels Below	20%	19%	5%
		One Level Below	20%	24%	6%
		Early On Grade	31%	25%	11%
		Mid On Grade or Above	30%	26%	11%

*Starting placement is fall 2017 placement for 2017–2018, fall 2018 placement for 2018–2019, and fall 2017 placement for both years.

Table A2: Ending Placement-Level Distribution for Students Who Met Stretch Growth

Subject	Grade Cohort	Ending Placement*	Percentage among Students Who Met Stretch Growth		
			2017–2018	2018–2019	Both Years
Reading	K → 1	Two Levels Below	N/A	0%	0%
		One Level Below	1%	2%	1%
		Early On Grade	10%	9%	4%
		Mid On Grade or Above	89%	89%	95%
	1 → 2	Two Levels Below	0%	0%	0%
		One Level Below	3%	8%	2%
		Early On Grade	11%	20%	10%
		Mid On Grade or Above	85%	72%	87%
	2 → 3	Three or More Levels Below	N/A	0%	0%
		Two Levels Below	0%	0%	0%
		One Level Below	9%	4%	2%
		Early On Grade	20%	23%	16%
		Mid On Grade or Above	70%	72%	82%
	3 → 4	Three or More Levels Below	0%	1%	0%
		Two Levels Below	1%	1%	0%
		One Level Below	5%	18%	10%
		Early On Grade	25%	18%	15%
		Mid On Grade or Above	69%	62%	75%
	4 → 5	Three or More Levels Below	1%	1%	0%
		Two Levels Below	1%	3%	1%
		One Level Below	20%	13%	8%
		Early On Grade	19%	27%	22%
		Mid On Grade or Above	59%	57%	69%
	5 → 6	Three or More Levels Below	2%	5%	2%
		Two Levels Below	4%	4%	2%
		One Level Below	15%	11%	7%
		Early On Grade	28%	18%	14%
		Mid On Grade or Above	51%	63%	76%
	6 → 7	Three or More Levels Below	6%	8%	4%
		Two Levels Below	4%	3%	2%
		One Level Below	12%	8%	5%
		Early On Grade	18%	26%	21%
		Mid On Grade or Above	59%	54%	68%
	7 → 8	Three or More Levels Below	10%	11%	7%
		Two Levels Below	4%	3%	2%
		One Level Below	8%	9%	6%
		Early On Grade	26%	24%	20%
		Mid On Grade or Above	52%	53%	65%

*Ending placement is spring 2018 placement for 2017–2018 and spring 2019 placement for 2018–2019 and both years.

Subject	Grade Cohort	Ending Placement*	Percentage among Students Who Met Stretch Growth		
			2017–2018	**2018–2019**	**Both Years**
Mathematics	K → 1	Two Levels Below	N/A	0%	0%
		One Level Below	5%	9%	7%
		Early On Grade	10%	13%	10%
		Mid On Grade or Above	84%	78%	83%
	1 → 2	Two Levels Below	0%	0%	0%
		One Level Below	11%	6%	3%
		Early On Grade	15%	18%	14%
		Mid On Grade or Above	74%	76%	83%
	2 → 3	Three or More Levels Below	N/A	0%	0%
		Two Levels Below	0%	0%	0%
		One Level Below	8%	6%	3%
		Early On Grade	20%	19%	14%
		Mid On Grade or Above	72%	75%	84%
	3 → 4	Three or More Levels Below	0%	0%	0%
		Two Levels Below	0%	0%	0%
		One Level Below	7%	5%	2%
		Early On Grade	20%	15%	10%
		Mid On Grade or Above	73%	79%	89%
	4 → 5	Three or More Levels Below	0%	1%	0%
		Two Levels Below	1%	1%	0%
		One Level Below	5%	7%	2%
		Early On Grade	16%	19%	12%
		Mid On Grade or Above	77%	72%	85%
	5 → 6	Three or More Levels Below	1%	2%	1%
		Two Levels Below	1%	2%	1%
		One Level Below	9%	13%	6%
		Early On Grade	22%	21%	15%
		Mid On Grade or Above	67%	62%	78%
	6 → 7	Three or More Levels Below	2%	3%	1%
		Two Levels Below	2%	3%	1%
		One Level Below	16%	16%	9%
		Early On Grade	24%	27%	20%
		Mid On Grade or Above	56%	50%	69%
	7 → 8	Three or More Levels Below	5%	7%	4%
		Two Levels Below	5%	5%	3%
		One Level Below	20%	18%	11%
		Early On Grade	28%	31%	25%
		Mid On Grade or Above	43%	39%	57%

*Ending placement is spring 2018 placement for 2017–2018 and spring 2019 placement for 2018–2019 and both years.

Table A3: Ending Placement Distribution for Students Who Met Stretch Growth in Both Years by Starting Placement

Subject	Grade Cohort	Starting Placement*	N	Three or More Levels Below	Two Levels Below	One Level Below	Early On Grade	Mid On Grade or Above
Reading	K → 1	One Level Below	18,922	N/A	0%	1%	6%	92%
		Early On Grade	6,017	N/A	0%	0%	0%	100%
		Mid On Grade or Above	3,067	N/A	0%	0%	0%	100%
	1 → 2	Two Levels Below	1,188	N/A	0%	13%	38%	49%
		One Level Below	30,034	N/A	0%	3%	14%	83%
		Early On Grade	5,784	N/A	0%	0%	0%	100%
		Mid On Grade or Above	7,705	N/A	0%	0%	0%	100%
	2 → 3	Two Levels Below	4,343	0%	1%	10%	47%	41%
		One Level Below	19,912	0%	0%	1%	27%	72%
		Early On Grade	7,519	0%	0%	0%	1%	99%
		Mid On Grade or Above	14,158	0%	0%	0%	0%	100%
	3 → 4	Three or More Levels Below	1,378	2%	6%	52%	23%	16%
		Two Levels Below	4,900	0%	1%	39%	34%	25%
		One Level Below	10,430	0%	0%	14%	34%	52%
		Early On Grade	10,789	0%	0%	1%	6%	93%
		Mid On Grade or Above	14,826	0%	0%	0%	0%	100%
	4 → 5	Three or More Levels Below	2,511	5%	15%	42%	26%	12%
		Two Levels Below	2,038	0%	2%	32%	47%	18%
		One Level Below	14,414	0%	0%	8%	40%	52%
		Early On Grade	7,710	0%	0%	0%	7%	93%
		Mid On Grade or Above	9,783	0%	0%	0%	1%	99%
	5 → 6	Three or More Levels Below	1,478	24%	17%	28%	16%	15%
		Two Levels Below	2,568	1%	2%	22%	36%	39%
		One Level Below	7,224	0%	0%	4%	21%	75%
		Early On Grade	4,679	0%	0%	0%	2%	97%
		Mid On Grade or Above	3,675	0%	0%	0%	0%	100%
	6 → 7	Three or More Levels Below	2,404	24%	10%	20%	29%	16%
		Two Levels Below	1,636	1%	1%	8%	52%	39%
		One Level Below	4,264	0%	0%	2%	30%	68%
		Early On Grade	1,877	0%	0%	0%	5%	95%
		Mid On Grade or Above	4,109	0%	0%	0%	1%	99%
	7 → 8	Three or More Levels Below	2,644	25%	7%	21%	31%	17%
		Two Levels Below	1,048	0%	1%	4%	44%	50%
		One Level Below	2,252	0%	0%	2%	29%	68%
		Early On Grade	1,656	0%	0%	0%	4%	96%
		Mid On Grade or Above	2,484	0%	0%	0%	0%	100%

*Starting placement is fall 2017 placement and ending placement is spring 2019 placement.

Subject	Grade Cohort	Starting Placement*	N	Ending Placement*				
				Three or More Levels Below	Two Levels Below	One Level Below	Early On Grade	Mid On Grade or Above
Mathematics	K → 1	One Level Below	23,385	N/A	0%	9%	12%	79%
		Early On Grade	2,742	N/A	0%	0%	1%	99%
		Mid On Grade or Above	2,777	N/A	0%	0%	0%	100%
	1 → 2	Two Levels Below	1,630	N/A	1%	17%	34%	48%
		One Level Below	31,091	N/A	0%	3%	15%	82%
		Early On Grade	2,038	N/A	0%	0%	0%	100%
		Mid On Grade or Above	1,671	N/A	0%	0%	0%	100%
	2 → 3	Two Levels Below	5,093	0%	0%	14%	35%	50%
		One Level Below	27,215	0%	0%	1%	12%	87%
		Early On Grade	2,480	0%	0%	0%	0%	100%
		Mid On Grade or Above	2,189	0%	0%	0%	0%	100%
	3 → 4	Three or More Levels Below	1,088	1%	3%	24%	38%	34%
		Two Levels Below	5,435	0%	0%	7%	34%	59%
		One Level Below	24,010	0%	0%	0%	8%	92%
		Early On Grade	9,803	0%	0%	0%	0%	100%
		Mid On Grade or Above	2,891	0%	0%	0%	0%	100%
	4 → 5	Three or More Levels Below	1,516	4%	6%	31%	39%	21%
		Two Levels Below	2,862	0%	0%	9%	47%	43%
		One Level Below	13,431	0%	0%	1%	16%	83%
		Early On Grade	9,129	0%	0%	0%	0%	100%
		Mid On Grade or Above	7,186	0%	0%	0%	0%	100%
	5 → 6	Three or More Levels Below	1,332	8%	8%	45%	28%	12%
		Two Levels Below	1,373	0%	1%	22%	51%	26%
		One Level Below	5,480	0%	0%	4%	27%	69%
		Early On Grade	4,962	0%	0%	0%	1%	99%
		Mid On Grade or Above	4,715	0%	0%	0%	0%	100%
	6 → 7	Three or More Levels Below	1,465	11%	14%	46%	23%	6%
		Two Levels Below	1,067	0%	1%	32%	52%	15%
		One Level Below	4,464	0%	0%	6%	41%	52%
		Early On Grade	4,715	0%	0%	0%	4%	96%
		Mid On Grade or Above	3,042	0%	0%	0%	0%	100%
	7 → 8	Three or More Levels Below	1,564	22%	16%	34%	23%	5%
		Two Levels Below	1,040	1%	2%	31%	54%	12%
		One Level Below	3,417	0%	0%	6%	42%	53%
		Early On Grade	2,763	0%	0%	0%	5%	95%
		Mid On Grade or Above	1,005	0%	0%	0%	0%	100%

*Starting placement is fall 2017 placement and ending placement is spring 2019 placement.